



July 17, 2019

Submitted via email

California Air Resources Board
1001 I St
Sacramento, CA 95814

Subject: Joint Comments on Low Carbon Fuel Standard (LCFS) Guidance 19-07 “CARB Review and Approval of Third-Party Reviewers for CCS Projects”

Dear Mr. Mitchell,

Clean Air Task Force (CATF) and Environmental Defense Fund (EDF) appreciate the continued opportunity to provide feedback to California Air Resources Board (CARB) on guidance documents relating to the implementation of the LCFS regulation. This letter provides joint comments from CATF and EDF on LCFS Guidance 19-07 “CARB Review and Approval of Third-Party Reviewers for CCS Projects.”

Geologic sequestration of captured anthropogenic CO₂ emissions is a necessary tool to avoid the worst impacts of climate change. Having incorporated Carbon Capture & Sequestration (CCS) technologies into the LCFS, California continues to demonstrate leadership in developing innovative strategies to address climate change to meet bold climate targets. CATF has engaged with CARB in the development of the CCS protocol since the start and have has remained focused on regulatory development that ensures that captured CO₂ from CCS projects is securely stored in the deep subsurface. With that in mind, CATF and EDF have the following recommendations and comments on the proposed guidance:

1. Demonstration of competency

Upon reviewing the duties of the third-party reviewer, as listed under LCFS Protocol section C.1.1.1. (a) and C.1.1.1. (b and d), CATF and EDF recommend that the evaluation of the following key competencies should be required of any third party reviewer:

- Subsurface geological evaluation (for example: evaluating historical data including stratigraphic data based on correlations of well logs, core analyses, 3D seismic and subsurface modeling).
- Well construction, well integrity, corrective action methods, and well plugging and abandonment plan evaluation.
- CO₂ injection plans and pressure management.
- Monitoring strategies and technologies.
- Post injection site care tools and strategies.

In general, a working knowledge of Enhanced Oil Recovery (EOR) operations is important when the reviewer is working on a project that employs EOR as a method for CO₂ storage. However, core competencies may require different emphasis in projects that plan to store CO₂ in saline formations where the subsurface may be less well understood and where pressure is not managed by production such as in EOR. Examples of specific core competencies needed for saline projects include subsurface evaluation using remote sensing methods such as 3D seismic, evaluation of injection plans including pressure management (e.g. water production) and avoidance of induced seismicity. For this reason, we recommend that CARB expect third-party reviewers to demonstrate a broader competence in CO₂ storage than competence with EOR alone.

In as much as an independent third party review would require a wide variety of skills – from geophysics and geology to reservoir engineering and monitoring and accounting – and, moreover, given the few active CO₂ storage projects

today, it is unrealistic to expect that that a single consultant could immediately provide the requisite skill set to undertake a robust independent technical assessment. There is not likely to be immediately a large enough pool of competent reviewers with all the required professional experience. Instead, we urge CARB to suggest that the third party be a consultancy comprised of a team of reviewers, whose combined competencies would meet the the requisite competencies and attendant CARB requirements.

2. Consider potential future auditor certifications

Although there are not yet in 2019 any accreditation bodies to certify independent auditors specifically for geologic sequestration projects, there may be training and accreditation bodies in the future, for instance, under the ISO TC 265 standards 27916: 2019 “Carbon dioxide capture, transportation and geological storage -- Carbon dioxide storage using enhanced oil recovery (CO₂-EOR)” and ISO 27914:2017 “Carbon dioxide capture, transportation and geological storage -- Geological storage.” If such accreditation bodies indeed do exist in the future, we recommend that CARB consider allowing third party reviewer applicants to provide qualifying information regarding those certifications as an independent source of information in demonstrating competency.

3. Conflict of interest

We agree with CARB’s guidelines on ensuring there is no conflict of interest on the part of the third-party reviewers to ensure the secure storage of injected CO₂ for CA LCFS CCS projects.

Thank you for considering our comments.

Sincerely,
Deepika Nagabhushan
Program Director – Decarbonized Fossil Energy
Clean Air Task Force

Scott Anderson
Senior Director – Energy
Environmental Defense Fund